#### § 57.5001

	MSHA stand- ard	National consensus standard
	§ 57.4560	ASTM E-162—Surface Flammability of Materials Using a Radiant Heat Energy Source.

### Subpart D—Air Quality, Radiation, Physical Agents, and Diesel Particulate Matter

AIR QUALITY—SURFACE AND UNDERGROUND

# § 57.5001 Exposure limits for airborne contaminants.

Except as permitted by §57.5005—

(a) Except as provided in paragraph (b), the exposure to airborne contaminants shall not exceed, on the basis of a time weighted average, the threshold limit values adopted by the American Conference of Governmental Industrial Hygienists, as set forth and explained in the 1973 edition of the Conference's publication, entitled "TLV's Threshold Limit Values for Chemical Substances in Workroom Air Adopted by ACGIH for 1973," pages 1 through 54, which are hereby incorporated by reference and made a part hereof. This publication may be obtained from the American Conference of Governmental Industrial Hygienists by writing to 1330 Kemper Meadow Drive, Attn: Customer Service, Cincinnati, OH45240, http:// www.acgih.org, or may be examined in any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration. Excursions above the listed thresholds shall not be of a greater magnitude than is characterized as permissible by the Conference.

(b) Asbestos standard—(1) Definitions. Asbestos is a generic term for a number of asbestiform hydrated silicates that, when crushed or processed, separate into flexible fibers made up of fibrils.

Asbestos means chrysotile, cummingtonite-grunerite asbestos (amosite), crocidolite, anthophylite asbestos, tremolite asbestos, and actinolite asbestos.

Asbestos fiber means a fiber of asbestos that meets the criteria of a fiber.

Fiber means a particle longer than 5 micrometers ( $\mu m$ ) with a length-to-diameter ratio of at least 3-to-1.

- (2) Permissible Exposure Limits (PELs)—(i) Full-shift limit. A miner's personal exposure to asbestos shall not exceed an 8-hour time-weighted average full-shift airborne concentration of 0.1 fiber per cubic centimeter of air (f/cc).
- (ii) Excursion limit. No miner shall be exposed at any time to airborne concentrations of asbestos in excess of 1 fiber per cubic centimeter of air (f/cc) as averaged over a sampling period of 30 minutes.
- (3) Measurement of airborne asbestos fiber concentration. Potential asbestos fiber concentration shall be determined by phase contrast microscopy (PCM) using the OSHA Reference Method in OSHA's asbestos standard found in 29 CFR 1910.1001, Appendix A, or a method at least equivalent to that method in identifying a potential asbestos exposure exceeding the 0.1 f/cc full-shift limit or the 1 f/cc excursion limit. When PCM results indicate a potential exposure exceeding the 0.1 f/cc fullshift limit or the 1 f/cc excursion limit, samples shall be further analyzed using transmission electron microscopy according to NIOSH Method 7402 or a method at least equivalent to that method.
- (c) Employees shall be withdrawn from areas where there is present an airborne contaminant given a "C" designation by the Conference and the concentration exceeds the threshold limit value listed for that contaminant.

 $[50~{\rm FR}~4082,~{\rm Jan.}~29,~1985,~{\rm as~amended~at~60}$  FR 35695, July 11, 1995; 71 FR 16667, Apr. 3, 2006; 73 FR 11303, Feb. 29, 2008; 73 FR 66172, Nov. 7, 2008]

### § 57.5002 Exposure monitoring.

Dust, gas, mist, and fume surveys shall be conducted as frequently as necessary to determine the adequacy of control measures.

## § 57.5005 Control of exposure to airborne contaminants.

Control of employee exposure to harmful airborne contaminants shall be, insofar as feasible, by prevention of contamination, removal by exhaust ventilation, or by dilution with uncontaminated air. However, where accepted engineering control measures